

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-26 (**Canceled**)

27. (**Currently amended**) A fuel injector in injection systems for internal combustion engines, the fuel injector comprising,

a valve body (2) containing a control chamber (19) whose pressure can be relieved, which control chamber can be acted on with fuel via an inlet throttle (32) and can be pressure-relieved via a first outlet throttle (17) ~~with a whose~~ closing element (43) **which** can be actuated by an actuator (15), and the valve body (2) having connected to a holding body (5) that has a nozzle body (9) connected to it, which encompasses an injection valve element (11),

an additional outlet throttle (18), and

an additional actuator (16) operable to actuate a closing element (49) of the additional outlet throttle (18) ~~or the closing element (49) being operable as a function of the power supply (70, 73, 79) to a double-switching actuator (50) in order to relieve the pressure in the control chamber (19)~~ **wherein the valve body (2) has a central high-pressure connection (3) that uses fuel to act on a nozzle chamber (12) encompassing the injection valve element (11) in the nozzle body (9), and wherein the fuel in the nozzle chamber (12) flows in via an inlet bore (36, 57), which is embodied in the valve body (2) and in the holding body (5) and extends parallel to the central bore 6 in the holding body (5).**

28. **(Currently amended)** The fuel injector according to claim 27, wherein the first outlet throttle (17) and the additional outlet throttle (18) are disposed opposite from each other inside the valve body (2) ~~body (29)~~.

29. **(Currently amended)** The fuel injector according to claim 27, wherein the first and additional outlet throttles ~~second outlet throttle~~ (17, 18) are provided in inserts (30) disposed on opposite sides from each other inside the valve body (2).

30. **(Currently amended)** The fuel injector according to claim 29, wherein the first and additional ~~second~~ outlet throttles (17, 18) are contained in inserts (30) and can be interchanged with other inserts, the inserts (30) being fastened in the valve body (2) by means of valve clamping screws (29).

31. **(Previously presented)** The fuel injector according to claim 27, wherein the inlet throttle (32) is provided in an interchangeable insert piece (35), which is affixed in the valve body (2) by means of a high-pressure fitting (31).

32. **(Previously presented)** The fuel injector according to claim 27, wherein the orientation of the inlet throttle (32) of the control chamber (19) is rotated by 90° in relation to the first and second outlet throttles (17, 18).

33. **(Previously presented)** The fuel injector according to claim 31, wherein the inlet throttle (32) of the control chamber (19) in the valve body (2) is disposed opposite from a pressure measurement connection (34) that contains a throttle restriction.

34. **(Previously presented)** The fuel injector according to claim 27, wherein the closing elements (43, 49) respectively associated with the outlet throttles (17, 18) are embodied as spherical.

35. **(Previously presented)** The fuel injector according to claim 27, wherein the first and second outlet throttle (17, 18) are provided in inserts (30) disposed on opposite sides from each other inside the valve body (2), and wherein the closing elements (43, 49) respectively associated with the outlet throttles (17, 18) are embodied as conical bodies that cooperate with a seat (48) embodied in the inserts (30).

36. **(Currently amended)** The fuel injector according to claim 27, wherein the first and second actuator (15, 16) ~~and the double-switching actuator (50)~~ are embodied as solenoid valves.

37. **(Currently amended)** The fuel injector according to claim 27, wherein the first and second actuator (15, 16) ~~and the double-switching actuator (50)~~ are embodied as piezoelectric actuators.

38. **(Previously presented)** The fuel injector according to claim 27, wherein the holding body (5) is interchangeably fastened to the valve body (2).

39. **(Previously presented)** The fuel injector according to claim 38, wherein the holding body (5) is fastened to the valve body (2) by means of a clamping nut (4).

40. **(Canceled)**

41. **(Currently amended)** The fuel injector according to **claim 53**, ~~claim 27~~, wherein the double-switching actuator (50) is embodied as a solenoid valve whose magnet coil (50.1) triggers a first and second valve (60, 61), which are associated with the first and second outlet throttle (17, 18), in a slightly time-delayed fashion or one after the other, depending on the power supply to the magnet coil (50.1).

42. **(Previously presented)** The fuel injector according to claim 41, wherein the power supply to the magnet coil (50.1) occurs with a first power supply curve (70) for the first valve (60) and with a second power supply curve (73) for the second valve (61) and the power supply curves (70, 73, 79) each include a current step-up (72, 75).

43. **(Previously presented)** The fuel injector according to claim 41, wherein, during the valve movement (77), only the first valve (60) opens, which is powered with a first power supply curve (70).

44. **(Previously presented)** The fuel injector according to claim 42, wherein during a second valve movement (78), the first valve (60) and the second valve (61) are triggered with a second power supply curve (73) and open in a slightly time-delayed fashion.

45. **(Previously presented)** The fuel injector according to claim 41, wherein the first valve (60) is triggered with a first power supply curve (70) during a first triggering period (77) and during a joint triggering period (80) of the first and second valves (61, 61), the second valve (61) can be powered with the third power supply curve (79).

46. **(Previously presented)** The fuel injector according claim 27, further comprising a pressure booster (86) with a piston (86.1) loaded by a spring (86.2), and wherein the low-pressure side of the pressure booster (86) is connected to a pressure reservoir (85) and the high-pressure side of the pressure booster (86) is connected to the nozzle chamber (12) of the fuel injector (1).

47. **(Previously presented)** The fuel injector according to claim 46, wherein the piston area ratio between the high-pressure side and the low-pressure side of the pressure booster (86) lies in a range from 1:1.5 to 1:3.

48. **(Previously presented)** The fuel injector according to claim 46, wherein the spring chamber (86.3) of the pressure booster (86) is connected via a discharge line (86.4) to the connection of

the second outlet throttle (18) oriented away from the control chamber (19) of the fuel injector (1).

49. **(Previously presented)** The fuel injector according to claim 46, wherein the pressure booster (86) includes a check valve (87) that closes off the high-pressure side of the pressure booster (86) from the low-pressure side of the pressure booster (86).

50. **(Previously presented)** A method for controlling a fuel injector according to claim 46, comprising supplying power to the first magnetic actuator (15) or a piezoelectric actuator to cause the first outlet throttle (17) to open, thus relieving the pressure of the control chamber (19) of the fuel injector (1), and the resulting opening of the nozzle needle initiates the injection process.

51. **(Previously presented)** A method for controlling a fuel injector according to claim 46, comprising supplying power to the second magnetic actuator (16) or a piezoelectric actuator to cause the second outlet throttle (18) and also the discharge line (86.4) of the spring chamber (86.3) of the pressure booster (86) to open, wherein the resulting relief of the pressure in the control chamber (19) of the fuel injector (1) causes the nozzle needle to open and the movement of the piston (86.1) of the pressure booster (86) causes the nozzle chamber (12) of the fuel injector (1) to be acted on with a pressure that exceeds the pressure level in the pressure reservoir (85).

52. **(Previously presented)** A method for controlling a fuel injector according to claim 46, comprising supplying power to both of the magnetic actuators (15, 16) or a piezoelectric actuator to cause both outlet throttles (17, 18) to open, wherein the resulting relief of the pressure in the control chamber (19) of the fuel injector (1) causes the nozzle needle to open and the movement of the piston (86.1) of the pressure booster (86) causes the nozzle chamber (12) of the fuel injector (1) to be acted on with a pressure that exceeds the pressure level in the pressure reservoir (85).

53. **(New)** The fuel injector of claim 27 wherein the closing element (49) of the additional outlet throttle (18) is operable as a function of the power supply (70, 73, 79) to a double-switching actuator (50) in order to relieve the pressure in the control chamber (19).

54. **(New)** The fuel injector according to claim 53, wherein the double-switching actuator (50) is embodied as a solenoid valve.

55. **(New)** The fuel injector according to claim 53, wherein the double-switching actuator (50) is embodied as a piezoelectric actuator.